The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Office of State Assessment
Albany, New York 12234

Notice to Teachers

Physical Setting/Physics

Thursday, June 21, 2007

Please photocopy this notice and give a copy of it to each teacher administering the Regents Examination in Physical Setting/Physics.

This notice pertains to the rating guide for questions 47, 55, and 61 of the June 2007 Regents Examination in Physical Setting/Physics. Due to technical problems, some labels are missing from the diagrams provided for these three questions. Attached are replacement pages 4, 6, and 8 with the corrected diagrams.

Please refer to the Department publication *Regents Examination in Physical Setting/Physics: Rating Guide for Parts B–2 and C*. This publication can be found on the New York State Education Department web site http://www.emsc.nysed.gov/osa/scire/scirearch/phyratg02.pdf. Teachers should become familiar with this guide before rating students' papers.

Scoring Criteria for Calculations

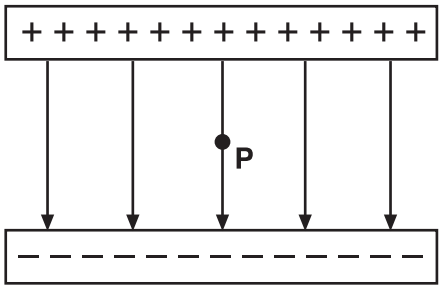
For each question requiring the student to show *all calculations, including the equation and substitution with units*, apply the following scoring criteria:

- Allow 1 credit for the equation and substitution of values with units. If the equation and/or substitution with units is not shown, do *not* allow this credit.
- Allow 1 credit for the correct answer (number and unit). If the number is given without the unit, do *not* allow this credit.
- Penalize a student only once per equation for omitting units.
- Allow full credit even if the answer is not expressed with the correct number of significant figures.

Part B–2

47 [1] Allow 1 credit for drawing *at least five* straight parallel lines perpendicular to the plates and pointing toward the negative plate. The lines must originate and end on the plates.

Example of a 1-credit response:



Note: Curved lines beyond the edges of the plates are acceptable.
Parallel lines need not be equally spaced.

48 [2] Allow a maximum of 2 credits. Refer to *Scoring Criteria for Calculations* in this rating guide.

Example of a 2-credit response:

$$E = \frac{F_e}{q}$$

$$F_e = Eq$$

$$F_e = (2.0 \times 10^3 \text{ N/C})\ (1.6 \times 10^{-19} \text{ C})$$

$$F_e = 3.2 \times 10^{-16} \text{ N}$$

[4]

52 [2] Allow a maximum of 2 credits. Refer to *Scoring Criteria for Calculations* in this rating guide.

Example of a 2-credit response:

$A_x = A \cos \theta$

$F_x = (60.\ \text{N}) \cos 30.°$

$F_x = 52\ \text{N}$

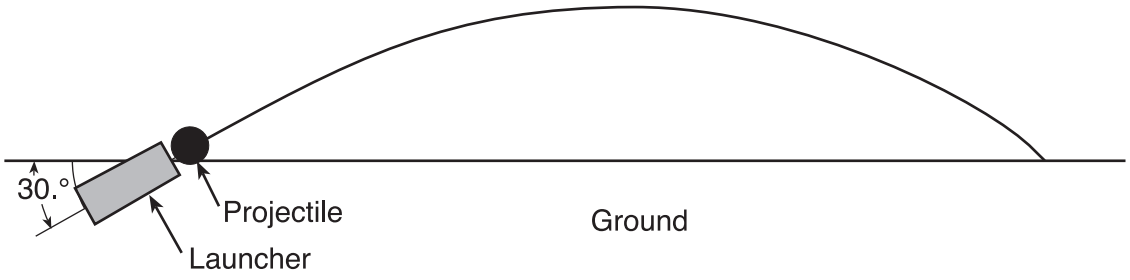
53 [1] Allow 1 credit for 52 N *or* an answer that is consistent with the student's response to question 52.

54 [2] Allow a maximum of 2 credits, 1 credit for indicating that the kinetic energy decreases and 1 credit for indicating that internal energy increases.

Note: Do *not* allow credit for indicating that kinetic energy changes into potential energy.

55 [1] Allow 1 credit for a parabolic-shaped path.

Example of a 1-credit response:



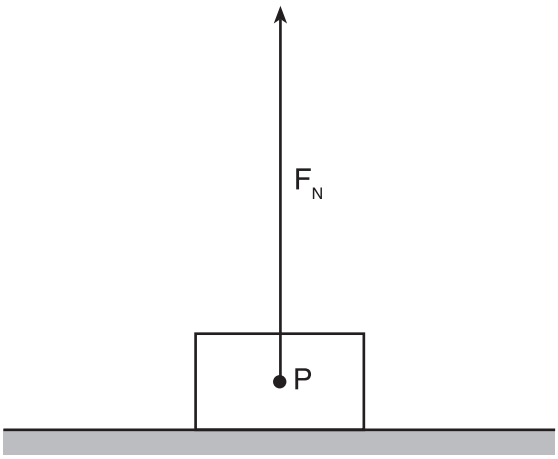
56 [1] Allow 1 credit for indicating that the projectile's maximum altitude will increase.

57 [1] Allow 1 credit for indicating that the total horizontal distance will increase.

Part C

61 [1] Allow 1 credit for drawing and labeling a vector 5.0 cm (± 0.2 cm) long, directed upward. Do *not* allow credit if the vector is not labeled or is missing the arrowhead.

Example of a 1-credit response:



Note: Allow credit if the student draws the correct vector from the box and *not* from point *P*.

62 [2] Allow a maximum of 2 credits. Refer to *Scoring Criteria for Calculations* in this rating guide.

Example of a 2-credit response:

$F_f = \mu F_N$
$F_f = (0.30)(20.\ \text{N})$
$F_f = 6.0\ \text{N}$

63 [1] Allow 1 credit for 2.0 N *or* an answer that is consistent with the student's response to question 62.

64 [1] Allow 1 credit for 2.0 kg.